



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
[www.uspto.gov](http://www.uspto.gov)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/608,741	06/27/2003	Richard F. Davis	024.0012	7727
29906	7590	11/01/2005	EXAMINER	
INGRASSIA FISHER & LORENZ, P.C. 7150 E. CAMELBACK, STE. 325 SCOTTSDALE, AZ 85251			NGUYEN, DUC M	
			ART UNIT	PAPER NUMBER
			2685	

DATE MAILED: 11/01/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/608,741	DAVIS, RICHARD F.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Duc M. Nguyen	2685	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on \_\_\_\_.
- 2a) This action is FINAL.                    2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_ is/are allowed.
- 6) Claim(s) 1-4 and 13-20 is/are rejected.
- 7) Claim(s) 5-12 is/are objected to.
- 8) Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on \_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) All    b) Some \* c) None of:
    1. Certified copies of the priority documents have been received.
    2. Certified copies of the priority documents have been received in Application No. \_\_\_\_.
    3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | Paper No(s)/Mail Date: ____   |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date: ____ | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
|   | 6) <input type="checkbox"/> Other: ____                                     |

## DETAILED ACTION

### ***Information Disclosure Statement***

1. The references listed in the information disclosure statements submitted on 6/27/03 has been considered by the examiner (see attached PTO-1449).

### ***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –  
(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claim 17 is rejected under 35 U.S.C. 102(b) as being anticipated by Bley (US Pat. Number 4,534,602).

Regarding claim 17, Bley discloses a method for reducing radio frequency coupling between interconnects in a radio frequency system comprising the steps of: forming a plurality of through holes in a first component in a radio frequency system wherein said first component is electrically conductive (see Figs. 1a, 2a, and col. 3, lines 60-67);

placing at least one conductive elastomeric gasket in proximity to each interconnect such that said conductive elastomeric gasket contacts said first component and a second component (see Figs 1a, 2a and col. 3, lines 38-60).

### ***Claim Rejections - 35 USC § 103***

Art Unit: 2685

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-4, 13-16, 18-20 are rejected under 35 U.S.C. 103(a) as being unpatentable by Applicant's admitted prior art (Figs 1-2), hereafter AAPA, in view of **Bley** (US 4,534, 602).

Regarding claim 1, AAPA discloses a prior art radio frequency system which would include all the claimed limitations (see Figs. 1-2 and [0016] through [0029]) except for a conductive elastomeric gasket shielding a portion of compressible bellows interconnects. However, **Bley** discloses a method for reducing radio frequency coupling between interconnects in a radio frequency system by placing at least one conductive elastomeric gasket in proximity to each interconnect such that said conductive elastomeric gasket contacts two components such as printed circuit boards. Since AAPA discloses an RF interconnector for IC circuit boards, it would have been obvious to one skilled in the art at the time the invention was made to provide the above teaching **Bley** to AAPA for incorporating such conductive elastomeric gasket in the RF interconnector system in AAPA as well, to form the shield of a plurality of coaxial connectors, for providing conductive paths of controlled impedance between IC circuit boards.

Regarding claim **2**, the claim is rejected for the same reason as set forth in claim 1 above. In addition, since the use of top cap and bottom cap for a compressible bellows is known in the art, it would have been obvious to one skilled in the art at the time the invention was made to further modify **Bley** and AAPA to provide first cap and second cap as claimed, to ensure stable physical and electrical contact for the compressible bellows.

Regarding claim **3**, the claim is rejected for the same reason as set forth in claim 2 above. In addition, AAPA discloses a pin for coupling RF signals (see [0020]).

Regarding claim **4**, the claim is rejected for the same reason as set forth in claim 3 above. In addition, AAPA discloses a cylindrical shape for the compressible bellows (see Fig. 2).

Regarding claims **13, 18**, the claims are interpreted and rejected for the same reason as set forth in claim 1 above. In addition, it is clear that AAPA and Bley would disclose a plurality of openings (holes) and major surfaces as claimed in order to provide contact areas for electrical connection (see AAPA, Figs. 1-2), wherein it would have been obvious to one skilled in the art to include a ground plane as disclosed by Bley (see col. 5, lines 10-48), for suppression interferences of external signals.

Regarding claim **14**, the claim is rejected for the same reason as set forth in claim 13 above. In addition, Bley discloses a clamping force (see Figs. 1a), for holding two circuit boards together.

Regarding claim **15**, the claim is rejected for the same reason as set forth in claim 14 above. In addition, it is clear that AAPA as modified would disclose the ground

plane, integration plate, and each conductive elastomeric gasket combine to form a radio frequency shield around each opening of said plurality of openings in said integration plate (see Bley, col. 5, lines 10-48).

Regarding claim 16, the claim is rejected for the same reason as set forth in claim 15 above. In addition, it is clear that AAPA as modified would disclose each dielectric sleeve, compressible bellows interconnect, and integration plate form a coaxial interconnect (see Bley, col. 5, lines 10-48).

Regarding claim 19, the claim is rejected for the same reason as set forth in claim 18 above. In addition, it is clear that AAPA as modified would disclose the step of assembling the radio frequency system such that each compressible bellows interconnect is compressed and each of said at least one conductive elastomeric gasket in proximity to each interconnect is compressed thereby electrically coupling said first component to said second component (see Bley, Figs 1-2 and Abstract).

Regarding claim 20, the claim is rejected for the same reason as set forth in claim 19 above. In addition, it would have been obvious to one skilled in the art at the time the invention was made to further modify Bley and AAPA to provide a step of forming a grounded shield radially around each compressible bellows interconnect when the radio frequency system is assembled, in order to prevent interferences from external signals to the system RF signal.

***Allowable Subject Matter***

6. Claims 5-12 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Conclusion***

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

**Drackner et al** (US Pub. Number 2002/0186107), Apparatus for connecting transmission paths.

**Ranghelli et al** (US 4,521,754), Tuning and temperature compensation arrangement for microwave resonators.

**Ice et al** (US 2004/0203289), Angled EMI shield for transceiver-PCB interface.

**Yeung et al** (US 2004/0038587), High frequency coaxial connector for microcircuit packaging.

**Morelli** (US 6,857,891), High frequency coaxial connector.

8. **Any response to this action should be mailed to:**

Commissioner of Patents and Trademarks

Washington, D.C. 20231

**or faxed to:**

(571) 273-8300 (for **formal** communications intended for entry)

(571)-273-7893 (for informal or **draft** communications).

Art Unit: 2685

Hand-delivered responses should be brought to Customer Service Window,  
Randolph Building, 401 Dulany Street, Alexandria, VA 22314.

Any inquiry concerning this communication or communications from the examiner  
should be directed to Duc M. Nguyen whose telephone number is (571) 272-7893,  
Monday-Thursday (9:00 AM - 5:00 PM).

Or to Edward Urban (Supervisor) whose telephone number is (571) 272-7899.

Duc M. Nguyen  
Oct 26, 2005

A handwritten signature in black ink, appearing to read "Duc M. Nguyen".